

COVID-19

St Thomas' Main Theatres

QUICK REFERENCE HANDBOOK

2ND EDITION
OCTOBER 2020

Change Log

List of recent changes

- 2nd October 2020**
- Full withdrawal of all first edition action cards
 - Addition of *T1-1: Preparing for emergency intubation of a COVID-19 patient*
 - Addition of *T1-2: Emergency Intubation of a COVID-19 patient*
 - Addition of *T1-3: Extubation of a COVID-19 patient after an emergency procedure*
 - Addition of *T1-4: MERIT Team procedures*

SECTION 1

Airway management for COVID-19 red pathway patients

• Assemble breathing system prior to intubation

⇒ Plan for airway difficulty and brief team (see *T1-2: Intubation of a COVID-19 patient*)

3 Check patient has an ID wristband

4 Check patient allergy status

5 Remove personal items e.g. mobile phone, ID badge, keys from pockets

6 Don and check AGP PPE equipment

7 Move to hot room

⇒ Take ONLY the metal trolley into the hot room

⇒ Any additional equipment will be handed through by the runner

- DO NOT USE side-stream gas analyser where mainstream capnograph available
- DO NOT use a Waters Circuit
- If no anaesthetic machine is available:
 - Waters Circuit with HME filter between patient and APL will be necessary
 - Place HME filters at the patient end of the circuit, and at the ventilator if possible

Drugs and IV access:

- Induction drugs for RSI
- Emergency drugs e.g. vasopressors
- Maintenance drugs and equipment e.g. propofol and pumps
- IV cannula, dressing, tourniquet with spares immediately available in clean room

Rescue Devices:

- Alternative supraglottic airways in a range of sizes
- Prepare an Aintree Intubating Catheter, an Ambu-scope Slim and a monitor in the clean room, but do not take it in to the hot room until needed at *Plan B: Secondary Intubation*
- Marker pen
- Emergency front of neck airway kit (scalpel, bougie, tube)

• If hypoxia low pressure low volume mask ventilation (two handed technique)

5 Turn oxygen off before removing mask

➤ Perform *Plan A: Primary intubation*

6 If intubation successful:

➤ Perform *post-intubation actions*

7 If laryngoscopy difficult:

➤ Insert iGel and ventilate

➤ Perform *Plan B: Secondary Intubation*

➤ If successful perform *post-intubation actions*

8 If cannot ventilate via iGel:

➤ Perform *Plan C: Mask ventilation*

9 If cannot mask ventilate:

➤ Perform *Plan D: Front of neck airway*

➤ Perform *post-intubation actions*

Plan D: Front of Neck Airway

- Scalpel (size 10 blade)
- Bougie
- Size 6.0 tracheal tube

Post-intubation Actions

- Connect breathing circuit HME, inline suction, and capnograph
 - If using side-stream capnography it must be placed on the clean side of the HME filter
- Inflate cuff BEFORE ventilation
- Turn oxygen on
- Confirm capnography
- Secure tracheal tube with tie and note tube depth
- Start sedation/anaesthesia
- Check tracheal tube cuff pressure; must be at least 5cmH₂O above inspiratory pressure to minimise leak
- If the circuit must be disconnected occlude the tracheal tube with a clamp before detaching, and leave the filter on the patient side
- Consider inserting NG tube and/or central venous access for ICU admissions

- Careful oral suction with Yankauer sucker
- ⇒ Tracheal suction with inline suction system
- 5 Perform final pre-extubation checks**
 - ⇒ Check train-of-four > 0.9 and establish self-ventilation
 - ⇒ Check $E_tO_2 > 0.9$
 - ⇒ Fully open APL value
- 6 Stop anaesthetic agent(s)**
- 7 Untie tube tie and maintain control of tracheal tube**
- 8 Prepare team for extubation process**
 - ⇒ Check patient can obey commands
 - ⇒ Deflate cuff at the point of extubation then remove tube to inco-pad
 - ⇒ Apply anaesthetic facemark immediately
 - ⇒ Apply Hudson mask AND surgical mask once airway confirmed and coughing subsided
- 9 Recovery of COVID positive patients should take place in theatre**

- Oropharyngeal airway
- Anaesthetic facemask
- Hudson mask
- Surgical facemask
- iGel
- Yankauer sucker
- Syringe to deflate tube cuff
- Intubation equipment for emergency use

3

- Prepare a tracheal tube clamp
- Perform intubation per action card**
- Check tube position with Waters Circuit and capnograph
- Apply clamp to tracheal tube then disconnect the circuit on clean side of HME filter
- Connect the mechanical ventilator and unclamp the tracheal tube
- Start mechanical ventilation using *recommended ventilation strategy for ARDS*

4

- Check cardiovascular stability**
- Give vasopressors early to avoid excessive fluid challenges after initial resuscitation phase

5

Check blood gas

6

- Prepare for transfer**
- Call ICU bed co-ordinator to determine transfer destination
- Check consumables prior to departure and syringes labelled for ICU
- Tape breathing circuit joins
- Avoid secondary transfers e.g. to radiology en-route to ICU

- Tidal volume 6-8ml/kg predicted body weight
- Allow permissive hypercapnia
- Target Values**
- SpO₂: 90-94%
- pH > 7.3
- PaCO₂: < 6kPa

Predicted Body Weight Formula

- Male: 50 + (0.91 × [height in cm – 152.4])
- Female: 45.5 + (0.91 × [height in cm – 152.4])

If difficulty achieving target values early discussion with CRT consultant for escalation to SRF or ECMO teams

Useful contacts

- All MERIT referrals must be made through the CRT team on your site